

**HOUSE COMMITTEE ON AGRICULTURE AND NATURAL RESOURCES
OREGON LEGISLATURE**

**Testimony of Scott D. Campbell, DVM
President/Owner of Silvies Valley Ranch
Tuesday, February 6, 2018**

Thank you Chairman Clem, Vice Chairs McLain and Sprenger, and Members of Committee, for giving me the opportunity to report on the pilot project you authorized with HB 3465 seven years ago. The Bill required that after completing the project, I was to report back on how it went and the hurdles that needed to be addressed to make it easier for the next guy or gal. You've also helped with some of the really high hurdles since then, so I also thank you for that help along the way, too.

When I was a small boy living in Burns, I remember being "loaded" in the back of my parent's station wagon and heading for Pendleton. It happened a lot. My great-grandparents had homesteaded just north of Pendleton in 1866 and my grandparents, aunts, uncles, and my first, second and third cousins lived there – many still do.

That was in the early '60s and we drove up U.S. 395. Going through Silvies Valley was always the most exciting part of the trip – there were thousands of buffalo, some yaks, Texas longhorns, zebra, cowboys, and lots of other fun things to see on the way through.

When I graduated from Burns High School in 1975, Harney and Grant Counties were actually two of the most prosperous counties in the state. Then, I went away to Oregon State for college and married a Burns girl – many of you know Sandy – in my last year of college, during which time the mills closed and cattle ranching fell on hard times. There were no opportunities in Harney County when we graduated from OSU, so, like most kids from Burns, we went to Portland to work and raise a family, dreaming of returning someday and maybe buying that ranch!

Eleven years ago in 2007, we did just that – but after we bought it, we came to realize just how bad the economy was in Frontier Oregon and just how much poverty had overtaken much of Harney and Grant Counties. The County Judge at the time, Steve Grasty, told me that the real unemployment rate was over 35 percent in the county; schools were only open four days a week; most businesses on Main Street had shut down; heck, you could buy a 3-bedroom house on a hundred acres of land for 65-70 thousand dollars – all conditions we in Portland can't even comprehend – it's kind of like our own Appalachia right here in Oregon, only it's dry and cold – and it hasn't changed much in the past 10 years.

We found that the ranch we bought was in equally bad shape – it was an environmental disaster – and we looked at ourselves as environmentalists! Many decades of overgrazing, over-harvesting, and neglect, had all taken their toll. The creeks had eroded an average of 8 feet into the ancient wet meadows (that weren't wet anymore) and the meadows were no longer connected to their water tables; all the beaver and most of the wildlife was gone; the forests were a disaster, ready to burn with

the first spark; and the ranch had lost about eighty-percent of its agricultural productivity – the 6,000 acres of meadow produced only 1500 tons of hay (a quarter-ton per acre). Most of the ranch buildings and houses weren't safe to walk into let alone sleep in, and the fences and roads were what we politely call "pretty bad."

The poverty and the ecological problems were overwhelming, and we sure didn't have the answers. At first, we just handed out money. Grants for this, grants for that. Donations to this cause and that cause. But, we soon realized that it didn't do anything to fix the problem. So... we kept talking to everybody we could find to discover possible solutions – for the ranch and for the Frontier Oregon economy –how to reverse the death spiral of poverty. We gradually started working with Oregon State University. Many professors and many students came (and still come) to the ranch to do research, learn, and give us ideas.

The OSU connection has grown and led to many things: like ways of measuring the improvement of riparian areas by noting the presence of different species of song birds; new techniques in how to measure water flow in extremely small ephemeral streams in real time (never before done); in new common sense ways to do stream restoration at an affordable cost – that then can reestablish healthy fish populations where none had been for many decades; and in the recovery of thousands of acres of wildlife and livestock habitat. You see, they are the same thing – both wildlife and livestock need food, shelter and water; and livestock are needed to pay for the wildlife habitat on private land and to pay for the restorations. Visits by OSU students and staff challenged us to do GIS mapping of the ranch, and to figure out ways to improve things like the hay production. The meadows now produce over a ton and a half per acre instead of a quarter-ton – over 5 times more than before and without any artificial fertilization irrigation, and with only native grasses and plants – and the natural watering of the meadows actually recharges the aquifer. OSU also helped us identify better ways to raise and care for cattle so they are now part of our ecosystem, and to identify better ways to prevent fire and reduce weeds: goats! We now have the largest herd of organic meat goats in the world! They eat all the plants that grow out of control and become fire tinder – so, now we sell our juniper, brush, and invasive weeds as goat meat called "chevon"; \$3.00 per pound for juniper on the hoof! One student's master's thesis even proved that our stream restoration projects have a one-hundred-percent return on investment in less than three years – plus the environmental return which benefits everyone.

But the bigger deal can be the longer term effects. Besides the opportunity to repeat this environmental and agriculture success on a wide spread basis, we have the opportunity to share one of the most beautiful places in the world with others. THAT has the potential to turn places like Seneca and Long Creek into places like Aspen, Jackson Hole, Bandon, and Bend. This could end the poverty in Frontier Oregon and replace it with a vibrant economy and a fresh, new and exciting place for Oregonians, other Americans, and even well-heeled international visitors to spend their money on vacations, corporate retreats, destination weddings, and real life Western adventures, as well as in local restaurants, galleries and other businesses. At the same time, we would return Frontier Oregon to being a good place to live and raise a family. We still don't know for sure it will all work out exactly as planned, but seven years ago this committee had the vision to let us try a pilot project that committed no public financial support and it has already funneled millions of dollars into the Grant and Harney County economies with lots more to come.

As you'll remember, the project was a destination eco-resort in Silvies Valley between Burns and John Day – or if you're still not really sure where that is: about halfway between Bend and Boise. That's about as "Frontier Oregon" as you can get. We have now built a boutique eco-resort there with 32 very nice rooms, four golf courses – including the first reversible 18-hole courses in North America – a full service spa, a small conference center, a great restaurant with an outstanding wine list and the best scotch and Irish whiskey collection that you will find for 100 miles! There is horseback riding, fishing, pistol and rifle target shooting, stargazing, wildlife tours, birding, hiking and biking, massages – and relaxation – where it is so quiet you can hear your own heartbeat...

When Sandy and I bought the ranch in 2007, it had three employees and pastured about 800 yearling cattle for the summer. Last summer, we had 92 employees (35 all winter) – that's 89 new jobs – and we have 4,500 head of cattle, over 2,000 goats, and herds of wildlife. Our goal is to provide a fun Frontier Oregon experience to over 800 guests this summer, all while making further improvements to our ecosystem and economy.

HB 3465 really mattered. This year it will have brought over 100 new jobs, and at least \$2 million in tourism dollars from outside the state of Oregon. That's a good return for your Committee and with no state investment!!

Last year, The Retreat wasn't finished, but we opened anyway for a 10-week preview season, mostly for golf and travel writers. As a result, The Retreat & Links at Silvies Valley Ranch was in over 50 magazine articles with an estimated reach of over 474 million readers – that was good for The Retreat, but great for Oregon. Now, we need all of you to please come visit Silvies this summer and tell your friends about it – the only thing slowing our success is helping people to learn about it – and find it!

So, again I want to thank this Committee, the Oregon legislature and past-Governor Kitzhaber, for making this experiment possible through the passage of HB 3465. We all know that one eco-resort in Silvies isn't going to fix the economy in all of Frontier Oregon, but it can prove that the problem is fixable and is one way to do that without funding from taxpayer dollars – in fact, it generates tax dollars.

This year, we will start selling a few Vacation Cabins at Silvies, approved as part of HB 3465, and designed to be sustainable – completely off the grid with solar power and grey water systems. The cabins can't be occupied year around and are being built on the hills on the Northwest corner of the ranch – on land that won't grow good forest or good pasture. The property tax on these cabins is sorely needed in Grant County schools. With the building of the Vacation Cabins will come more construction jobs, service jobs to maintain them, and jobs in the community to entertain and provide services to their owner, their families and guests. So Chairman Clem, thanks to you and your Committee, the future is bright.

Now, I have a few pictures and then I can answer any questions.

Retreat & Links

Background

Silvies Valley Ranch is one of the few remaining storied working livestock ranches in the United States – and was always one of the prettiest. It is located on the Silvies River in Eastern Oregon, about 150 miles south of Pendleton between Burns and John Day, and halfway between Bend, Oregon and Boise, Idaho. Founded in 1883, the ranch consists of thousands of acres of meadows and forest, and miles and miles of rivers and streams – part of the High Desert at an elevation of 5,000 feet in the Southern Blues; it is in the northern-most reach of the Great Basin. Aside from raising premium Organic, grass finished cattle and goats for white tablecloth restaurants and premium branded hay for organic dairies and champion show horses, the ranch is highly focused on reconstruction ecology and has many landscape scale riparian and wildlife habitat restoration projects in various stages of completion. All ranch improvements fully embrace the significant commitments to sustainable ecological enhancement and conservation of natural resources; in fact, they are a hallmark of Silvies Valley Ranch's core philosophy.

In order to share the wonders of nature in this unique setting while creating and providing good jobs in a chronically underemployed part of the state where poverty is the rule, the ranch is adding many visitor amenities in order to share the majestic beauty of the area, the Western ranching experience, and the wildlife in their natural setting with folks looking for a unique experience in what is left of the Oregon Frontier. It is our belief that the good ecologically friendly ranching experiences by “city folks” will lead to greater awareness and understanding, and result in greater support of restorative ecology principles and projects throughout the country.

Why?

The Campbells are successful Oregon entrepreneurs, originally from the area, who founded Banfield, The Pet Hospital, a veterinary practice, and grew it from one to 750 locations in the U.S., United Kingdom and Mexico. The privately-held veterinary practice has literally changed the face of veterinary medicine around the world through the Campbells' bold ideas and courageous leadership. The family, though very private, are very community minded and have a strong, multi-generational history of philanthropy, an example of which was their creation of a 501C3 charity, The Banfield Charitable Trust, that provides scholarships, pays for veterinary care for families in need, collects and buys food in support of the Meals on Wheels Association of America recipients and their Pets, helps hospice workers with Pet related care, and supports literally thousands of Pet related organizations and individuals across the United States. Sandy even chaired the National Meals on Wheels Foundation headquartered in Washington D.C. for over a decade and currently sits on the Board of Trustees of the Oregon 4-H Foundation and the Oregon State University Foundation.

In 2008, Scott and Sandy sold their veterinary business and retired to their ranch in Silvies Valley, Oregon. Though the Campbells have long given significant charitable gifts in the area and continue to do so, they believe the best “gift” to give to help their community is to lead the way in establishing a viable new industry for the area that could grow beyond what they could do themselves. They believe that by creating a model ranch retreat that sets an example for ecological sensitivity, that does provide new, interesting and good paying jobs, and that is built and operated by local folks for the long term – that they can reverse the poverty and general trend of lower population, lower income, and higher unemployment in Frontier Oregon.

Ranch History

“Silvies” is the result of misspellings of the name of the first French trapper (Antonine Sylvaile) to enter the valley in the early 1820s. According to legal and historical records, he was employed by the Hudsons Bay Company and ultimately trapped about 200,000 beaver out of the Silvies Valley. What is now Silvies Valley Ranch was later homesteaded into about 70 different small ranches and the first water rights patented in 1883. Over the years, hardy pioneers and cowboys worked the meadows, valleys and surrounding mountains –many found the country too rugged and hard and moved on. One who came and stayed was John “Jack” Craddock who bought up many of the smaller places by the late ‘20s when the railroad was put through the valley. He was followed by his son Chet Craddock who put the ranch together much as it was when it was purchased by the Campbells, who have since increased the private holdings by over 30 percent.

Starting in the 1950s, the ranch passed from the Craddocks and for the next half-century was in the hands of a series of many different owners who were neither ranchers nor native Oregonians, but instead Californians, insurance companies, a grazing association, an investment broker, and even a restaurateur. These people harvested the timber, crops, livestock and wildlife, and subjected the ranch to many schemes including bankruptcy and turning the ranch into exotic wildlife hunting farms, buffalo refuges, dude ranches and even wild horse sanctuaries – but they did little to build or even maintain the ranch as a working livestock ranch with valuable natural environmental assets and wildlife.

In 2007, the ranch was purchased by the Campbells – a family with pioneer roots in Eastern Oregon much older than the ranch. The name of the ranch was returned to its historic name of “Silvies Valley Ranch” and a rendition of the earliest ranch brand was recorded to help write a new chapter in the ranch’s long history.

In early 2008, Robb & Lisa Foster (also a long time Eastern Oregon family) joined the ranch as owners and day-to-day managers. The ranch’s management team finalized a multi-year plan to return Silvies Valley Ranch to its former position as one of the leading enterprises in Eastern Oregon. The plan calls for the acquisition of more wildlife habitat, investment for development of new modern facilities, new homes for ranch associate families, new barns for livestock and hay, over 100 miles of new fences, as well as a significant investment in riparian and wildlife habitat restoration, and an investment in guest services and facilities.

Today the ranch is made up of 140,000 acres of deeded and leased National Forest and BLM lands in and surrounding Silvies Valley Oregon. Of the over 60 square miles of deeded property, there are 6,000 acres of mountain meadows, 14,000 acres of Ponderosa Pine forest, 20 miles of the Silvies River, over 20 creeks and drainages, cattle, goats and horses, as well as native Rocky Mountain elk, mule deer, pronghorn antelope, sage hens, grouse, pine martins, quail, black bear, cougar, coyotes, fox, bobcats, badgers, squirrels, chipmunks, porcupines, beaver, raccoons, river otters, hawks, eagles, pigmy rabbits, wild turkeys, cranes, swans, geese, ducks, song birds, woodpeckers, bass, catfish, perch and native red band trout, among other residents.

Concept

Silvies Valley Ranch was purchased with a small, closed guest ranch facility that had been operated at some level for several years and was re-approved by the Grant County Planning Commission in 2009 at the Campbells' request. The ranch has upgraded the existing facilities and added many more. Upgrades include complete refurbishment and expansion of guest accommodations and facilities and the addition of additional guest accommodations, as well as a small, state of the art conference center for executive retreats and a combination fitness center/spa facility with a lap pool and rock climbing wall. In conjunction with these improvements, the ranch is completing the construction of two 18-hole "world-class" championship golf courses and two additional courses that will all be open to guests and the public.

The target market for the Retreat and Links is identified as affluent professionals over 45 who are empty-nesters; from Asia, Europe and the U.S.; that are generally healthy and like the outdoors; who want, would appreciate and can afford an exclusive, luxury, educationally-oriented and fun learning experience; and who already have at least one vacation home and who may want to purchase a vacation cabin at Silvies Valley Ranch for use two to 40 weeks per year by their immediate or close family. The opening of the Silvies Valley Ranch Retreat & Links is targeted for April 2018 after a very successful 10-week preview opening in 2017 that yielded inclusion in 62 periodicals.

Most guests and owners will travel through Burns or John Day to get to the ranch, but they also may commute to Silvies by private aircraft and will love to bring friends and make new ones with the same focus on ecologically sound enjoyment of nature. The folks in our target market are excited to try new outdoor activities or retry activities (like fishing, horseback riding, or shooting) that they haven't done for decades, and are likely to fully explore this unique piece of Oregon – from Steens Mountain to the Fossil Beds.

All facilities are planned to be open to local residents at "Ranch Neighbor" rates to encourage community-wide participation and understanding and add flavor for guests from far away. The ranch intends to provide training to area residents for the anticipated new jobs.

GOALS AND DETAILS

Agricultural and Ecological

Aside from raising premium, organic, grass finished cattle and goats for white tablecloth restaurants and premium branded hay for dairies and show horses, the ranch is highly focused on reconstruction ecology and has many, many projects in various stages of completion including:

- New homes for ranch associate families
- New barns for livestock, and hay and equipment storage
- Over 100 miles of new fences for livestock management and habitat protection
- Thousands of acres of pasture and meadow reclamation and restoration
- Miles of riparian area and stream restoration
- Wildlife habitat restoration and wildlife and livestock water development projects

All current and future ranch improvements fully embrace the significant combined commitments to successful, sustained livestock management, ecological enhancement, and conservation of natural resources that are a hallmark of Silvies Valley Ranch's core philosophy:

"A sustainable livestock ranching and guest operation with abundant, healthy wildlife that sets a new standard in best ranching and environmental practices where associates stay for their lifetimes and guests return time after time."

Recreational and Educational

Silvies Valley Ranch would like to share the wonders of nature and the realities of sustainable livestock ranching with guests from outside the state and nation, while creating and providing good jobs in a severely underemployed part of Oregon where poverty abounds. The core belief is that a good ranching experience by “city people” will lead to greater awareness and understanding, and result in greater support of restorative ecology principles and projects throughout the state and the country. To meet its goal, Silvies Valley Ranch is adding amenities to enhance the guest experience while constantly enhancing the ecological health of the overall property. The facilities and amenities complete or under construction include:

- **Accommodations**
 - Luxury log cabins, each with 1 or 2 bedrooms, for an initial completion at opening of 16 luxury rooms
 - Luxury golf rooms in “Ranch Houses”: 12 double-king suites and 6 single-king suites located conveniently close to the Spa and Lodge, with a final build-out of 20-30 additional rooms
 - Each of the luxury cabins will have its own spa/hot tub, great room, and outstanding views in a tranquil setting where wildlife observation is an everyday delight
 - Private luxury vacation cabins will be available to purchase starting in 2018 as planned
- **Meeting Spaces**
 - The Council House Conference Center (capacity 60) for regional meetings and executive retreats is in the planning stage
 - Numerous other indoor and outdoor spaces throughout the ranch to meet every need (even on horseback or fly-ins!)
- **Dining Spots**
 - The Dining Room at the Lodge
 - The Posse’s Den at the Lodge (for groups up to 16), for private meetings, dining, or special events
 - The Porch at the Lodge (covered porch and patio area overlooking Otter Pond)
 - The Sun Room at the Lodge (planned expansion of the Lodge, designed to capture the early morning sun; Future)
 - Egan’s Hideout Clubhouse – light fare, snacks and drinks at the end of both 18 hole courses
 - In-suite dining and out of suite catering to meet every guest’s desires and needs
 - Numerous locations for rustic, gourmet, western and northwest picnics and gatherings
 - Full service Chuck Wagon for days or nights on the trail!
- **Spa and Fitness Center**
 - Separate Men and Women’s facilities, each with private lockers/showers
 - Sauna/Whirlpool Bath/Lap Pool (half Olympic-length)
 - Lounge/refreshments
 - Treatment rooms for:
 - Massages and Facials
 - Body Scrubs and Treatments
 - Manicures and Pedicures
 - Couples suite for side-by-side treatments, massages and scrubs
 - Specially developed moisturizers and dermatologicals using local plants and herbs that were used by local Native Americans
 - Fitness Center

- Workout equipment and weight machines
- Bicycles for self-guided ranch tours
- Rock climbing wall that's fun for beginners and challenging for veterans
- **Golf Links and Activities at the Retreat**
 - Only the second reversible 18-hole golf course in the World, after the Old Course at St. Andrews
 - "Hankins" 18-hole championship public course – north; named for historical ranch family
 - "Craddock" 18-hole championship public course – south; named for historical ranch family
 - "Chief Egan" 9-hole Par 3 and lake; named for the last Paiute War Chief (the site was part of the Reservation)
 - "Blue Bucket" Driving Range
 - "To be named" 18-hole putting course at Otter Pond (Future)
 - "McVeigh's Gauntlet" 7-hole challenge course
 - The Generals' Annual Charity Golf Tournament – to provide scholarships for Grant and Harney County students (Silvies Valley Ranch awarded its first 10 scholarships in 2010, which had increased to 19 in 2017)
- **Vacation Cabins**
 - Privately-owned luxury, solar powered vacation cabins with sustainable grey water systems
 - Owned by a single owner as an exclusive luxury vacation property
 - The ranch will provide:
 - Security and emergency medical response
 - Fire protection, construction and maintenance
 - Road construction and maintenance
 - Cabin and natural landscaping maintenance
 - Water, sewer, internet and phone service
 - Ten months maximum occupancy per year
 - Clustered development design to conserve open wildlife habitat
- **Example Activities Provided at the Ranch & Retreat (some seasonal)**
 - Wildlife viewing and photography tours with experienced rangers
 - Birding with experienced local & regional experts
 - ATV and hiking trails
 - Mountain biking trails and camping
 - Primitive secluded cabins for "a night in the wild"
 - Arena-based horse riding and lessons
 - Trail riding and camping experiences, ranger-guided
 - Cattle roundups that you can be part of (via the soft seat of a Ranger-driven Polaris Razor)
 - Goat herding that you can enjoy in the forest
 - Calving & Kidding
 - Pistol range, with self-defense and gun handling courses
 - Sporting clays and shotgun courses (Seneca)
 - Stream, spring and forest restorations you can be part of

- Masters & PhD student projects that you can help with or learn about
- Fishing for various species in the Silvies River and other ranch lakes (if the otters missed them!)
- Fishing “catch and eat” – or release – from Eagan and Otter Ponds
- Coach and sleigh excursions – get to know our team of Clydesdales!
- Hayrides and livestock feeding outings can be lots of fun
- Snowmobile excursions, including primitive cabins for overnight adventures
- Cross country skiing and snowshoeing adventures/excursions and trails
- Stargazing where it’s really dark – telescope and expert advice provided
- Rock hounding and fossil hunting
- Big Yellow Toys: operate giant bulldozers, rollers, excavators and trucks (Future)
- Tours and activities by other local activity partners: steelhead fishing, float trips, antiquing, historic tours, trail rides

Economic

Silvies Valley Ranch believes that by creating a model ranch retreat that follows good agricultural practices, is ecologically sensitive and sustainable, and provides new, interesting and good paying jobs, the ranch can help reverse the trend of increasing poverty, lower population, lower income, higher unemployment, and kids with no local future in Grant and Harney Counties.

We anticipate that some guests may want to purchase a vacation cabin on the ranch. These vacation cabins are anticipated to be developed on ranch property in the hills just north of the guest ranch in clusters of three to six and all zoning is pre-approved by local and state officials. The ranch will supply all construction, maintenance, fire protection, security, road construction and maintenance, water, sewer, internet and phone service, and work with the local power provider for power needs beyond the solar power generated at each vacation cabin. Cabin owners will be limited to using their vacation cabin for a maximum of 40 weeks per year (closed February and March) and will be precluded from using the cabin as a full time residence or from renting it to third parties. It is anticipated that the cabin owners will have little use of county services like schools – despite paying property taxes on their vacation cabin to help local schools, likely significant spending in the local communities, and the local jobs created taking care of them and their cabin.

When fully operational, the guest ranch, vacation cabins and golf course are anticipated to create up to 135-150 family wage jobs in Grant and Harney Counties within 15 years of the initial opening. Up to 10 vacation cabins will be targeted for construction and sold annually, with an ultimate (someday) build-out of approximately 500 vacation cabins scattered over more than 5,000 acres of property (one cabin per 20 acres). That property today provides about 950 AUM’s (grazing for about 320 cows for 3 months) with an annual grazing value of \$19,000. Alternatively, in addition to the creation of 135 new jobs, 500 vacation cabins would be anticipated to have a taxable value in excess of \$250 million (which at the current tax rate in Grant County would net more than \$5 million annually in tax revenue to support schools and other services), and 500 families using their cabins even for only four weeks per year would purchase millions of dollars in goods and services from Harney and Grant County businesses, helping the area recover from a decades long shrinking economy.

Job Creation

Prior to current ownership, the ranch had three year around employees, leased out the pastures, sold the hay, sold the hunting, sold the timber – and largely took the locally generated harvest money out of the community. The current ownership:

- is local with deep roots and relatives in the community (since 1867);
- has stocked the ranch with their own cattle and the largest organic goat herd in the U.S. year around – over 6500 head of livestock;
- has purchased over \$50 million in supplies, equipment, services, labor, etc., from local individuals and businesses over the last 10 years as the ranch has been substantially restored and guest amenities added;
- currently employs dozens of employees and contractors to work on the ranch, with many more during the summer work season (up to a total of 90 workers some weeks), and;
- is working to create an economic stimulus that will cost the public little or nothing and, when successful, could bring \$10-\$15 million annually into the community from outside the community – much from outside the state.

When successful, the plan will result in:

- Twelve full time year-round jobs for the livestock operation (instead of three)
- Twenty full time equivalents for the construction of the guest, vacation and recreational operations of the ranch
- Many more jobs. When fully operational, the guest ranch, vacation cabins and golf course are anticipated to create an additional 135-150 family wage jobs in Grant and Harney Counties (new annual payroll and benefits of over \$8 million)
- Up to 10 vacation cabins targeted for construction annually by the ranch construction team, with an ultimate build-out of approximately 500 vacation cabins scattered over approximately 5,000 acres of marginally productive property (one cabin per 20 acres – but in clusters of 3-7)
 - Anticipated to have a minimum taxable value in excess of \$250 million (which at the current tax rate in Grant County would net more than \$4 million annually in tax revenue to support schools and other local services)
 - That property today provides about 950 AUM's (grazing for about 320 cows for 3 months) with an approximate annual grazing value of \$19,000
 - The 500 families using their cabins even for only four weeks per year would purchase millions of dollars in goods and services from many Grant and Harney County businesses and residents.

All the anticipated facilities and all the guest and vacation cabins will be on a small part of the existing ranch in southern Grant County. All facilities are planned to be open to residents of Grant and Harney Counties at “Ranch Neighbor” rates to encourage community-wide participation and understanding. Silvies Valley Ranch plans to fill the new jobs with local residents and provide training as they come on-board.

SILVIES

SIMPLY AMAZING • SINCE 1883

TOTAL PLACEMENTS

68

TOTAL IMPRESSIONS

474,363,942

The Register-Guard

AVIDGOLFER

PGA MAGAZINE.COM

cigar aficionado

AG AVIDGOLFER

GOLFADVISOR

The Bulletin

USA TODAY

Golf Digest

NCGA GOLF SINCE 1901

中國報 CHINA PRESS

Forbes

LINKS THE BEST OF GOLF

Golfweek

CASCADE GOLFER

Blue Mountain EAGLE

HIGHLIGHTS OF 2017

- 2017 PGA Show
Secured 7 media interviews
- Preview Year for The Retreat & Links at Silvies Valley Ranch
- Solar Eclipse Viewing Event
- Photo Shoots
Brian Oar, Golf Photographer
Richter Studios, Photography and Lifestyle Videos
- Yardage Guidebook Development
- Social Media Channel Development
- Secured Golfweek Raters Event

"A new project in the high desert of Eastern Oregon is attracting attention not just for the quality of its new reversible golf layout, but also for the vision behind what may be the best new resort to come along in the American West in years."

- Jeff Wallach, The Grain



TOTAL VISITS

33

Golf Digest GOLFADVISOR

BEND

GOLFTIPS

PGA MAGAZINE.COM

GOLF CHANNEL

GOLF WRX

TRAVEL OREGON

MORNING READ GOLF AT A GLANCE

The Bulletin

The Register-Guard

LINKS THE BEST OF GOLF

<http://www.chinapress.com.my/20171212/%E9%AB%98%E7%90%83%E7%8E%A9%E5%AE%B6%E2%80%A7%E6%8F%AE%E6%A1%BF%E6%A8%82%E5%85%BC%E5%81%9A%E7%89%9B%E4%BB%94/>

中國報

CHINA PRESS

High golfer. Swing and Jean.

James Au | December 12, 2017



Oregon, USA

The United States, Oregon (Oregon) well-known golf resorts last month wrote Bandon Dunes Golf Resort. This time back to introduces Silvie's Valley Ranch.

Located in the eastern Oregon Silvie's Valley Ranch. Is a high altitude desert area. Owner Campbell family formerly engaged in animal husbandry, the entire piece of land about 14 acres, a few years ago to start the development of the resort project the Retreat & Links, is currently the pilot phase, is expected to officially open next year.

The entire resort project includes 36 vacation homes, a spa, two 18-hole courses, a 9-hole all-par-3 course and a super-difficult 7-hole course (not yet completed), a shooting club and a riding club.

In addition, guests staying can also visit the livestock activities to experience the cowboy life.

VPM: 5,520,000



Here is a large livestock farm with thousands of heads of cattle and sheep. Travelers visit the resort you can visit the ranch chatting with the cowboy.

Reversible Course hidden mysterious

From our country, travelers can fly to San Francisco and transfer to Portland for a two-hour flight from Portland Airport to Silvie's Valley Ranch.

Beautiful scenery along the way, the pilot and explained in detail the operation of small aircraft, very interesting. Silvie's Valley ranch has its own small airport, mini-machine landed directly on the edge of the resort, really VIP-style holiday experience.

Resort design to the western cowboy style, exposure, like going to the "Seven Swordsman Kou Zhi" shooting scenes. Holiday home lake built, quiet environment, in front of lake reflection, travelers paradise.

Golf is a unique experience at Silvie's valley Ranch because of the Reversible Course here and there are only a handful of places around the globe that make it a rare sight.

The world's first reversible course is the Old Course in Scotland, no opportunity to play the Old Course, come here to experience the mystery of reversible course.

What is reversible course? Is an 18-hole course can play in the opposite direction and become two 18-hole course. Its ingenious design is that the two courses share 18-fairways, but the greens are not the same.

VPM: 5,520,000



Resort Lake, sitting here to enjoy the sun, really happy too.

Enjoy playing ball regardless of level

The two 18 courses, Hankins Course and Craddock Course, were designed by renowned stadium architect Dan Hixson. Due to the common fairway relationship, the fairway here is particularly wide, no risk of sand pit, do not worry about tee kick off the OB, the chance of losing a small white ball is very low.

Dan Hixson was designed to look forward to building two exciting vacation courses. Regardless of the level of golfers, can enjoy playing here.

Due to the shared fairway, the club will only open one course a day, playing Hankins today and Craddock tomorrow. Personal opinion, the two courses have their own characteristics, design style close, but not exactly the same. As for which one you like, Yan thin ring fat, both are stunning, preferences vary from person to person.

VPM: 5,520,000



There are mountains and water resort golf course, beautiful scenery

Not just golf resorts

Dan Hixson also designed a fun 9-hole par 3 course, the Chief Egean Course, built by the lake with almost every hole at risk. Play in this stadium, the chance of losing a small white ball can be high!

For another super-challenging 7-hole course, McVeigh's Gauntlet Course has three and four par. As not yet completed, so can not be evaluated.

A visit to Silvie's Valley Ranch is a unique holiday experience because of its magnificent scenery and seclusion. In addition to playing outside, the shooting club here is also a memorable, you can play a good place for a whole day.

It has a variety of guns and guns, travelers can be used one by one, enjoy the fun of shooting. Shooting club someone to teach how to use all kinds of guns and shooting skills, travelers generally can get started quickly, hit the heart.

In addition, horse riding experience livestock husbandry, Mercedes-Benz in the grasslands above the desert, cattle and sheep visits cowboys, is also an interesting activity.

VPM: 5,520,000



Shooting club has someone to teach how to use all kinds of guns and shooting skills.

<https://www.golfdigest.com/story/silvies-valley-ranch-retreat-and-links-prepare-to-be-fascinated-by-a-remote-oregon-golf-course-and-its-not-bandon-dunes>

Golf Digest

This remote Oregon golf course will fascinate you (Psst: And no, it's not Bandon Dunes)

You hear 'reversible' golf course and you think gimmick. But picturesque Silvies Valley Ranch and Links is anything but that

By [Curt Sampson](#) | November, 14, 2017

Oregon's well-earned status in the new century as a golf mecca should be enhanced by its latest golf resort, which debuted in July and re-opens for play in May 2018 in the state's vast desert interior. Silvies Valley Ranch Retreat and Links ain't no links, but it definitely lives up to the retreat part of its name.

It's a five-hour drive southeast from Portland, three hours due west from Boise. The ride is spectacularly scenic, with so much desiccated geological splendor outside your window that you can't help but slow down to regard with awe the cathedrals of stone and the painted hills. The reward at the end of the trek includes silence so deep you can hear your heart beat, a golf course by Bandon Crossings architect Dan Hixson, and an audience with Dr. Scott Campbell, the founder of Silvies Valley Ranch, who is either a visionary or way ahead of his time.

I mean: a par 2?

Yes, Campbell is outside the box. But at a time when golf is trying hard to attract and retain converts, perhaps it's time to listen to fresh perspectives from innovators in other fields. The 59-year-old retired veterinarian, who resembles a young Warren Buffett, is not steeped in the game. But he's very good at boiling complex problems down to their essence, and after assessing the current landscape of golf he offers three words that, while not original, further validate the advice of other smart folks: "Make it fun



SVR owner Scott Campbell and his wife, Sandy.

We'd heard you could play his new course clockwise one day (called the Craddock course), and counter-clockwise (the Hankins course) the next. So, like my rain jacket and the Old Course, it's reversible! There were also whispers that Campbell and architect Hixson (who recently designed Wine Valley Golf Club in Walla Walla, Wash.), had contrived a spare nine holes so wacky it looked like the work of fantasy golf-hole artist Bud Chapman. And the Silvies Valley Ranch signature drink, the Horseshoe Nail, allegedly garnished with a crabapple skewered by said non-rusty nail. We had to see.

Campbell's name may ring a bell. He's the vet with the best ideas yet for taking care of your pet. "How many dogs do you own, Dr. Campbell?" I asked, the get-to-know-you cocktail-hour question I'd devised on the drive in from Bend with "Tin Cup" screenwriter John Norville.

"Five thousand," he said. "And it's Scott."

I'd heard correctly. His clinics lease dogs and cats. The nominal owners pay a monthly fee for grooming and shots and so on, but Campbell retains the title to Toto. Two of his other genius ideas were arranging to place mini-clinics in many Petsmart stores; and animal health insurance, a program that took off like a spaniel after a squirrel.

Since Campbell graduated from vet school at Oregon State, and bought the practice of a retiring Portland veterinarian in 1986, his innovation and careful execution led to the creation of 750 Banfield Animal Hospitals, which treat 100,000 patients a week, he says, and employ 250 veterinarians.

His stunning success allowed Campbell to return home, back over the Cascades, to arid, lonely, beautiful Eastern Oregon, and to establish a profitable cattle-and-goat operation on a 140,000-acre home on the range near Burns, where he grew up. That's 218 square miles, so big that a herd of 600 elk wanders unnoticed through the rugged dreamscape like a dull-witted motorcycle gang. And so big that it wasn't hard to find 600 acres for a golf resort that wouldn't interfere with the raisin' and grazin'.



The flexibility of Silvie's Valley Ranch is seen here with the 15th green on the Hankins course (center), the third on the Craddock course (right) and the fourth on the Craddock (left) all in close proximity.

"Tonight our chef has paired an Italian technique to our Pacific Halibut, and rewritten Bourguignon to an Oregon tune," announced a slip of a girl named Anna Rose. She and the rest of the wait staff wore the SVR uniform of head-to-toe Carhartt, looking like they could toss a bale of hay after they tossed the salad, which, this night, was a "reimagined" version of the classic Warm Bacon and Spinach.

And it was good. Since everyone who will visit has been on a significant journey, step one for SVR was exceptional food and hospitality. Check and double check. Norville and I stayed in The Beaver, one the luxurious log cabins. (There are 36 rooms on-site, which start at \$310 for the ranch house and \$350 for lake log cabins.) Netflix is on the tube, because no TV (or cellphone microwaves) could touch our isolation. A spa—"a nice one," said Campbell—will open next year.

Over chevon—which is to goat what steak is to cow—Campbell talked about how and why he did what he did at SVR and what we'd find when we teed it up the next morning.



The 18th green on the Hankins course.

The reversibility thing was Hixson's idea. But Campbell, a lousy golfer ("My handicap's 50—per hole," he said) quickly embraced it, perceiving a way to double the golf fun. The two 18-hole routings use 27 greens, and wide, wide fairways. Greens fees are \$225 for resort guests and \$260 for walk-up play. Does it work? Yes and no. The courses accomplish the variety mission, but I'd like to see them distill the thing to the 18 best. Four or five of the artistic Hixson's holes I'd like to play again and again. Capital G golfers prize quality and memorability over quantity.

But if you want memorable ... here are five elements of the experience at SVR I will never forget:

- **Handgun Golf (my name, not theirs)** You may not drink before or during this game. SVR staffer Colby Marshall drove us in a Polaris RZR four-wheeler over a couple of miles of dusty trails—we mingled with three cowboys and 450 bovines in a cattle drive on the way—to a secluded canyon inside a secluded canyon. At the range, after a crash course in safety, I rapid fired an Ace .22 caliber semi-automatic at a paper target depicting the outlines of three golf holes. Shot one over par.

- **20-mile Downhill Walk with a Goat** I didn't actually do this one, but I will next time. Someone takes you to a distant hill top, and you and a goat disembark. Said very tame, very trained hircine carries the food and drink, and guides you gently but firmly back to the barn. Humans at HQ use satellite technology to track your trip, and you've got a radio in case of emergency, such as an urgent desire to have Horseshoe Nails and Horseradish and Goat Cheese Puree waiting for you when you get back.

- **The Hideaway** The clubhouse, which is a three-quarters-of-a-mile ride from the Lodge, has a tree-house feel. With its epic views and its friendly staff, it may be the golf universe's best spot for a drink.



• **McVeigh's Gauntlet** Hixson drove us around the under-construction, whack-a-doodle third nine. Only it's just seven holes. And clearly it's not so much Hixson's design as Campbell's. The first hole is a shot from your roof to your neighbor's roof. There's the Par 2 we mentioned, and a 95-yard, straight downhill par 3 that will require only a putter, because a closely mown, banked ramp will extend from green to tee. Hilarity—and some drinking—will surely prevail on the McVeigh seven, which is slated to officially open in July 2018.

• **The Chief Egan** The par-3 course is just about perfect. Norville, Global Golf Advisors honcho John Strawn, and I played it several times, and enjoyed it most when we used just one club each. Pitching wedge is plenty. Given its elevation—about 4,700 feet—the ball goes far at SVR.

Plenty more Western-themed activities abound: Indian cave tours, fishing, wagon rides, rounding up cattle, herding goat, etc. One other good-to-know nugget: there a private air strip nearby to help a certain portion of the clientele to more easily visit.

Overall, Silvies Valley Ranch succeeds far more than it falls short, and it continues to be refined as it preps for its first full season of play in 2018. We salute Campbell's efforts to redefine the golf resort, and to make the golf thereon more varied and fun. SVR's great strength—its vast tranquil doses of solitude—is, of course, also its biggest challenge. As for the reversibility thing, we're hesitant to pronounce judgment, other than to observe that there are hardly any other reversible courses in the world. Sometimes conventional wisdom really is wisdom.

NOVEMBER 2017

The GRAIN

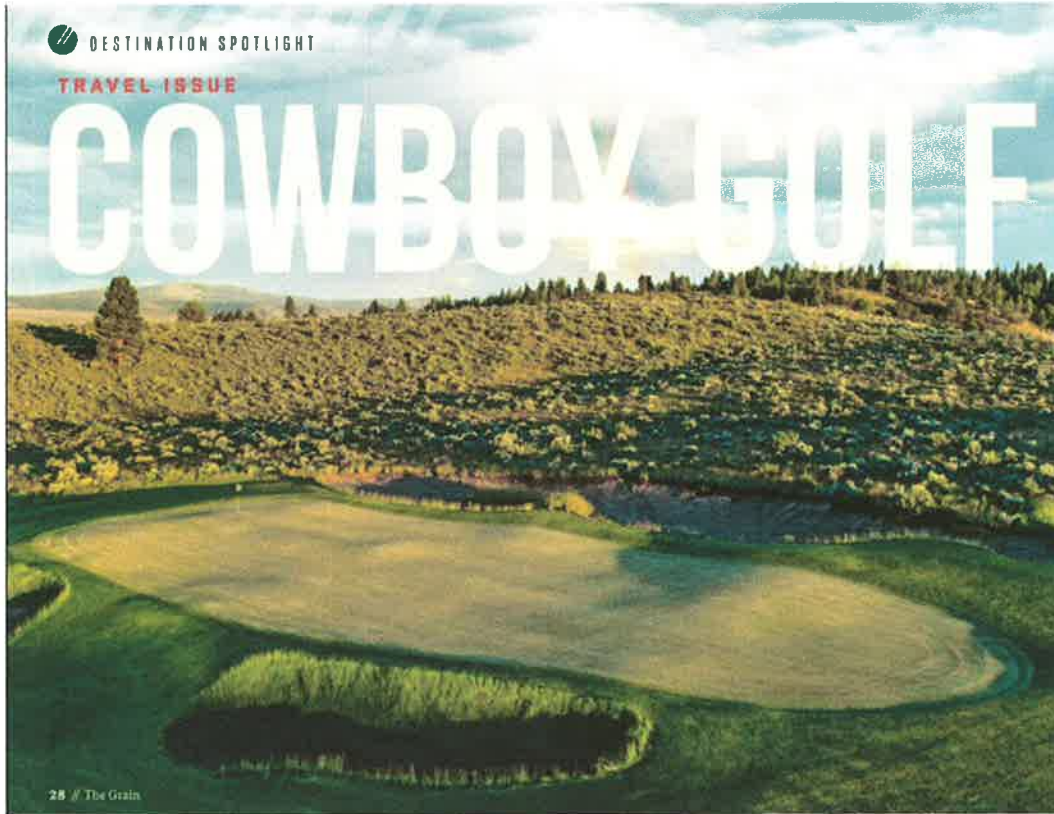
A New Read on Golf

TRAVEL ISSUE

GOLF JOURNEYS NEAR & FAR

- HAWAII ISLAND PARADISE
- 2018's HOT SPOTS
- MYRTLE BEACH'S GREAT 8
- A COURSE CALLED IRELAND

16 TOUR TIP: CONQUER A BURIED LIE IN BUNKERS
 18 HOLIDAY GIFT GUIDE: GOODIES FOR HER & HIM



DESTINATION SPOTLIGHT

TRAVEL ISSUE

COWBOY GOLF



PHOTO BY JUSTIN HARLEY

SILVIES VALLEY RANCH

Words Jeff Wallach | Photos Brian Orr



A new project in the high desert of eastern Oregon is attracting attention not just for the quality of its new reversible golf layout, but also for the vision behind what may be the best new resort to come along in the American West in many years. Silvies Valley Ranch, located outside of Burns, is the first golf property envisioned by eastern Oregon native Scott Campbell, who made his fortune in pet hospitals and has now devoted his resources to a pet project that may just put Burns on the golf destination map.

MORE THAN GOLF

"Our communities (in this region) are severely economically depressed due to the loss of the timber industry," Campbell said. "After much research and thought, we decided the best way to help was to prove that true destination tourism could thrive in this beautiful and isolated remnant of the Old West, frontier

Oregon, if done well. To that end, we decided to create a golf experience that was unique in the world, our goal being to create a 'must play' course like Bandon Dunes, which is at an even more isolated location."

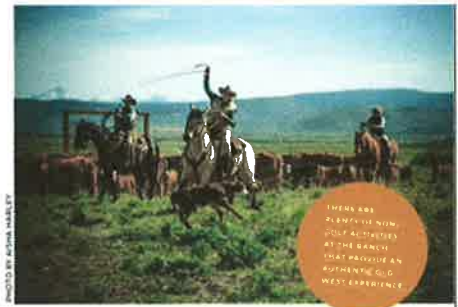
Perhaps, but Silvies Valley Ranch is still a five-hour drive from Portland, three hours from Boise or Redmond, and six hours from Reno. Private planes

can land on a 5,000-foot paved runway on the ranch, or at the Burns or John Day airports 45 minutes away.

But there's no doubt that this boutique frontier resort's ranch theme is authentic — the 140,000-acre property is home to herds of certified organic cattle and American Range goats, as well as other sustainable agricultural practices. This love-

the-land ethic is most evident in the acts of restoration going on across the property, from the preservation of original homesteads to the re-creation of natural habitat.

An ATV tour of the ranch with Colby Marshall — whose title, VP of livestock and guest services, is quite the hybrid — should be as mandatory as checking in to receive your own camo golf



There are plenty of non-golf activities at the ranch that provide an authentic Old West experience.



30 // The Grain

cart for use on the property's tamer acres. Other activities include cattle roundups, goat herding, fishing, tours of Indian caves, and shooting at three different gun ranges, including a sharpshooter's range.

REVERSE COURSE

The resort's golf courses — the Craddock and the Hankins, named for pioneer families who homesteaded this land — were designed by Oregon-based architect Dan Hixson. They provide an unusual and humorous journey, especially when you see that the back tees are pink and the forward tees black. Pithy quotes are laser cut into the metal rake heads in the bunkers, and you can win a Horseshoe Nail, the

Many players dread playing from a bunker. You see your ball go in one and you automatically think any number of unrepeatable things. At Silvies Valley Ranch, the bunker rakes are stamped with sayings all their own, created by Tygh Campbell. Here are a few favorites:

- Need Lessons? ■ Nice Try
- Oops ■ Nice knickers!
- I hate sand ■ Try again
- Take a Mulligan ■ Fore!
- Beer brake? ■ Drink Cart!



The reversible course at Silvies Valley Ranch contains elements with views of the eastern Oregon landscape.

resort's specialty cocktail, by one-putting the Craddock course's final four greens.

The fully reversible layouts are far more than simply mirror images because they employ 27 different greens. As per Campbell's orders, the courses have no water features, but they do have 100 gorgeously sculpted bunkers. The golf plays in opposite directions on alternative days.

Craddock opens along dramatic ridge tops and features a few blind shots before settling down into the meadows. On

the third hole, you may wonder about a tee-side bunker until you realize that tomorrow it will be a greenside hazard as you come the other way.

The bunkering in general is often more deceptive than penal. The final trio of holes play into a huge, grassy tureen sprinkled with wild bunkering, and the course ends with an eminently birdie-able hole, a nice change from most courses that save the toughest holes for last. The Hankins course opens in the same grassy amphitheater — reached via a downhill

tee shot full of drama — but contains more pronounced elevation changes than its counterpart.

SHORTER SWINGS

The resort also features a walking-only par 3 course called Chief Egan. Named for the last Paiute war chief, it's a mountain meadow layout on Paiute Creek and playable in an hour. What it lacks in hilly drama, it makes up for in clever green complexes that may elicit a few head scratches.

Hixson is also currently

Sustainability is an important focus at Silvies Valley Ranch. The clubhouse is solar powered, and rather than using massive amounts of insecticides, the superintendent employs swallows and bats to control mosquitoes."

finishing the shaping of a seven-hole (possibly eight holes if he's able to add a par-2 putting hole) "challenge course" called McVeigh's Gauntlet — a collection of difficult and dramatic holes playing through steep hills. The venue should prove to be a perfect option for winning back whatever cash wagers were lost during your 18-hole round.

RARE AIR

At almost 5,000 feet above sea level, these are the highest courses in Oregon, which means peak golf season is from June thru mid-October. Depending on the weather, the courses are expected to be open from mid-April through mid-November. Green fees are

\$210 for overnight guests (there are a variety of luxurious onsite accommodations), while day guests pay \$260. The fee includes all the golf you can play in a day (some guests have totaled 63 holes at a time). Carts are \$20 a day (not per person).

Sustainability is an important focus at Silvies Valley Ranch. The clubhouse is solar powered, and rather than using massive amounts of insecticides, the superintendent employs swallows and bats to control mosquitoes. Some 60 percent of the property incorporates gravity-powered irrigation to minimize water usage and help create the lowest carbon footprint possible.

The remoteness of the property may discourage the kind of people who might not get what this place is really about (as the remoteness of Bandon Dunes once did); but Silvies Valley Ranch is not a golf resort — it is a visionary resort property tied to an ethic of deep care for the land, which just happens to have a reversible golf course as one of its many charms. ■

For more information and reservations: www.SilviesValleyRanch.com



PHOTO BY DAVID ZAITZ

BACK NINE



<https://www.golftipsmag.com/travel/mountain-west/silvies-valley-ranch-oregon-original/>

GOLFTIPS

Silvies Valley Ranch: Oregon Original

Remote Resort Includes Reversible Courses

By Vic Williams

Oct. 11, 2017



The great state of Oregon jumped on the big-time international golf travel map nearly 20 years ago (hello, Bandon Dunes), and for decades before that had a foothold on the regional travel scene (hello, Bend), but when the Retreat and Links at Silvies Valley Ranch opened this summer, the map grew in a big, beautiful and brash way.

Sprouting on several hundred acres of dramatic high desert terrain at the northern end of a 140,000-acre working cattle ranch, a nearly six-hour drive from Portland and three hours from Boise, Idaho, Silvies isn't easy to get to. That's part of its against-the-grain essence and rough-edged charm. Golfers will rack up mega-miles to discover the next great course, and Eugene-born architect Dan Hixson's reversible 36 holes definitely qualify as great, or on their way to great once they've had a bit more time to mature.

Hixson and ranch owner Scott Campbell — a retired veterinarian from nearby Burns, Oregon, who bought the property with his wife, Sandy, in 2007 — walked the site several times before starting construction in 2010. A no-nonsense, detail-oriented guy who at one point considered skipping a course altogether or just doing nine holes, Campbell made Hixson an out-of-the-norm offer: Instead of paying him a design

fee, he'd put him on payroll and give him 10 percent of the course's revenue. Now Hixson is pretty much part of the family, and with the resort's opening, the rest of the traveling golfer community is invited to the table, too.

REVERSIBLE GOLF REVOLUTION



No. 14 on the Hankins Course is one of Silvies' few stand-alone holes.

As with the Old Course at St. Andrews or The Loop, Tom Doak's new design at Forest Dunes in Michigan, Hixson fashioned a full 36 holes on one 600-acre hunk of land (about 120 acres are turf), with each 18, the Hankins and Craddock, named after 19th century Silvies Valley homesteaders. The Hankins moves counterclockwise over the rolling mix of sage prairie, grassy meadows and pine-fir forest; the Craddock goes clockwise. Alternating daily for play, they share 27 greens and 16 fairways, with several other putting surfaces and a couple fairways unique to each course to make the best use of the site. Some would contend that makes it something other than truly "reversible," but Hixson did the right thing, and the results are surprising, engrossing, spectacular and flat-out fun.

"Scott jokes that Dan built more than 36 holes, but along the way picked his favorites," says Lee Harlow, who came on board as Director of Golf Operations just before the resort opened for preview stay-and-play business in July 2017. "Dan had a blank canvas; with all that land he was able to choose what he thought were the best golf holes. It takes a bit to get used to, but once you've played them a couple times you get a feel for them. Most designers need to worry about building around lots and real estate, but Dan had the run of the place."

ONE SITE, TWO EXPERIENCES



No. 13 on the Craddock Course plays the other direction as No. 6 on the Hankins. Photo by Ron Bellamy

Somehow Hixson — who also designed Bandon Crossings a few miles south of the famed golf resort, and Wine Valley in Walla Walla, Washington — devised two tracks that stand alone, with their own character. It's a thrill to come upon a hole, stand on one of the many elevated tees (from which the views are vast, encompassing not only the task at hand, but eons of geologic movement and restless human history), and realize you've covered that same ground from a different direction, without a hint of sameness. Greens and bunkers are shaped to attract or repel or swallow a shot on their own terms, from alternate angles. Fairways are wide, as they need to be to accommodate shared holes — but traps, creeks, wetlands, desert outcroppings and stands of trees sneak into sight and shot lines at just the right places. This is design sleight-of-hand of the most seductive kind and there needs to be more of it, for golf's sake and the planet's too (less turf means less water use).

HOLE TO HOLE HEAVEN



Silvies Valley Ranch's pro shop and Hideout grill overlook Craddock No. 18.

If fairways are football field broad, greens are St. Andrews huge. As on the Scottish coast, winds tend to kick up in these parts, so average size is well over 10,000 square feet — though you need to cut them in half when planning your approach, except on the few stand-alone holes: Holes 7 and 13-15 on the Hankins (on balance the easier of the two courses, according to most players) and Holes 10-12 on the Craddock (No. 18 Craddock also has its own green). Hixson went the hug-the-topography route when building his putting surfaces, asking the golfer to negotiate steep banks and cliffhanging reads from just a few feet from the cup. Nothing is a gimme, and if you're on the wrong side of a shared surface you could be looking at a 100-footer or more. That's part of the fun and a more than acceptable source of frustration. On what amounts to high-altitude links golf, creativity is key and playing the ball on the ground is a definite option, especially from 50 yards and in. Enjoy the challenge wrapped in serenity — no nearby structures or power lines, with the whispering trees and nibbling deer and stunning natural beauty your only distractions. Pick the right approach and pray for a two-putt average.

"I think they're two wonderful courses," Harlow says. "Hankins starts low and works its way up; Craddock goes up right away, then comes down."

But wait, there's more: Below the simple pro shop/clubhouse/grill complex known as The Hideout is the Chief Egan, a nine-hole par-3 layout built around a pond and wetlands that makes for the perfect sunset emergency round — beer in one hand, wedge and putter in the other. And next year a seven-hole target course called McVeigh's Gauntlet will debut, giving golfers another bet-settling option. "As I understand it, it'll also have a par-2 'bonus hole,'" Harlow says.

JUST THE BEGINNING



The bar inside the Lodge at Silvies Valley Ranch

Silvies Ranch is zoned for up to 7,500 rooms but Campbell doesn't expect it to get anywhere near that big. But it will indeed grow soon. The resort opened with 34 rooms and 44 beds spread over several cabins and a Ranch House, all appointed in "rustic luxury" — the two-bedroom lake cabins have separate king bedrooms with their own bathrooms with double-head rain showers, a large common area with kitchen, and small back porch with hot tub. There are RV hook-ups and the ranch also offers off-site lodging through local motels. The central Lodge is a former barn/bunkhouse that Campbell remodeled into a lovely single-story log cabin with full bar and restaurant with a pool room thrown in for good measure. On the dinner menu, which is served family style, is Silvies Ranch-sourced beef, pork and cheval, otherwise known as goat, which Campbell says is the next big thing in American cuisine as the nation's population welcomes more non beef-eaters from Africa and Asia. It also happens to be delicious. Golfers can get breakfast and lunch at the Hideout as well.

When the resort reopens next spring (it's currently closed for winter), several more cabins will be online; full-service spa with half-sized Olympic pool will pamper guests. And Campbell will fully staff for what he considers the property's biggest draw — the ranch experience itself, including cattle drives, Razor tours into the backcountry, target shooting (he's already build ranges for pistols and rifles), eco tours, hunting and fishing. "We want this to be a place for corporate retreats," he says.

In the meantime, adventurous golfers should plan to nail down a trip to this corner of the Oregon Outback. You'll have to wait until 2018 to taste what Campbell, Hixson and their team have cooked up, but you'll savor it from the first swing.

"Dr. Campbell, Sandy and Dan have a big vision, and the resources and creativity to execute it," Harlow says. "They are building something that's special."

<http://www.bendbulletin.com/lifestyle/5488349-151/silvies-valley-resort-builds-tourism-in-harney-and>

The Bulletin

Serving Central Oregon since 1903

Silvies Valley resort builds tourism in Harney and Grant counties At home in the Silvies Valley

By: John Gottberg Anderson
Date: August 6, 2017



SENECA —

By my second full day at the 140,000-acre Silvies Valley Ranch, I had played a round of golf on a unique, reversible 36-hole course. I had watched fleet of pronghorn antelope and powerful elk as they fled the growl of the hardy off-road "Razor" in which I rode. I could have cast a line for rare native red-band trout in a stream that meandered through a onetime sagebrush wasteland, now restored to aspen woodland.

I had enjoyed luxurious lodging in a spacious suite with custom fittings and a view across ponds and grasslands. I had enjoyed fine dining on chevon osso buco and beef tenderloin, prepared by a gourmet chef in a modern log lodge.

And in a fit of what perhaps was madness, I had emptied a deadly six-shooter into a zombie vampire clown on the shooting range: three shots to the body, three between the eyes.

This Week In Golf Biz: Golf Pride's Reach On Tour, Miura's New Irons, PXG Adds Star College Grad

Erik Matuszewski | June 24, 2017

SILVIES VALLEY RANCH'S ECLIPSE PACKAGE



The two 18-hole reversible layouts at Silvies Valley (Hankins and Craddock) were named to honor two Pioneer families who homesteaded the site.

The U.S. will have the chance to experience the first total eclipse of the sun in 26 years on Aug. 21.

Silvies Valley Ranch in Oregon will have an unparalleled view of one of nature's most extraordinary sights and is offering an uninterrupted viewing experience as part of its Total Eclipse of the Sun package.

A package for the three-day stay at the frontier boutique resort, which merges luxury with an authentic Western ranch experience, starts at \$1,800. It includes two rounds of golf at the resort's 18-hole reversible courses along with a guided viewing of the eclipse by a professional astronomer and other on-site activities such as shooting, fishing, mountain biking, goat herding and cattle drives. Watching a total eclipse of the sun while playing a reversible golf course? Now that's a once-in-a-lifetime experience.

Silvies Valley Ranch, OR: Using Artificial Beaver Dams to Restore Incised Streams



Map: Rachael Davee



Artificial beaver dams spreading water onto the flood plain on a tributary to the Silvies River.

Photo: Scott Campbell

Executive Summary

The Silvies Valley Ranch is attracting local and regional attention for its use of an extensive network of low head rock check dams, sometimes referred to as “artificial beaver dams” (ABDs), to facilitate the restoration of 18 miles of incised streams over the past 5 years. Ranch owner Scott Campbell believes that a significant cause of the stream incision is the absence of beaver over the last century; thus the ranch’s approach to restoration includes efforts to mimic beavers’ influence on the system. The ranch owners have been able to increase flood plain connectivity in their pastures and the quality and quantity of wet meadows on the property with no changes in how they graze their cattle. According to Campbell, the restoration has paid for itself many times over through increased range productivity, which has allowed them to increase herd size while also supporting increased wildlife numbers. Campbell would like to continue installing structures, but has encountered numerous road blocks in the permitting process. He has since taken an active role in changing state permitting rules to build support for the ABD technology being used on the ranch and to facilitate its adoption in other places. The transformation taking place on the Silvies Valley Ranch has garnered the attention of neighboring ranch owners, some of whom are beginning to experiment with similar restoration technologies.

Fast Facts

Location:

Silvies River,
Grant & Harney Counties, Oregon

Project Goals:

1. Develop a low cost restoration tool that can be used on this property and others.
2. Eliminate the regulatory barriers to implementation of the tool.
3. Enhance beaver habitat.

Project Scope:

640 structures; 18 miles of stream on 6 tributaries and the mainstem Silvies River

Main Project Partners:

Oregon State University
Oregon Natural Desert Association

Introduction and Methods

At the north end of the Great Basin, Oregon ranchers in Grant and Harney Counties who are economically dependent on livestock and hay production have a long history of adapting to environmental variability. Precipitation here averages 10-13 inches annually, but inter-annual precipitation patterns vary widely in the amount delivered as snow versus rain. This variability has made water management a central tenet of land stewardship and productivity, as growing grass for livestock forage in this watershed is highly dependent on natural flooding and flood irrigation systems. Historically, beavers engineered this landscape to optimize water retention through the building of dams, slowing and spreading the flow of water in riparian areas. However, their extirpation by the Hudson Bay Company in 1827, followed by a dramatic change in land use practices along riparian corridors, led to severe stream incision, which has reduced the ability of streams to access their floodplains and made flood irrigation challenging.

With climate trends portending decreased snowpack in the Silvies River watershed, private landowners are developing a variety of in-stream structures to facilitate watershed restoration and promote flows that are longer in duration and more consistent in an effort to improve hay production, forage conditions for livestock, and overall resilience to drought. Various terms “artificial beaver dams” (ABDs) by some ranch owners or “restoration check dams” by Oregon Department of State Lands (DSL), these structures have garnered significant attention for their potential to revolutionize approaches to watershed restoration -- but not without controversy.

The structures that have been built in the Silvies River watershed vary widely in size, materials, and scale of application, but all have a common goal: improving floodplain connectivity. A small-scale project on one property includes half a dozen dams made from juniper cuttings, while a mid-scale project on another uses dozens of rock dams and hardened cattle crossings. This case study focuses on the restoration approach being implemented on the Silvies Valley Ranch, a large-scale project featuring an extensive network of hundreds of rock and soil dams of varying sizes. It highlights the perceived benefits of ABDs, and challenges landowners’ experiences

building structures within the constraints of the current state and federal regulatory framework. It also includes insights regarding enabling factors that may improve the use of this restoration tool in the future, and characterizes gaps in our understanding about the direct and indirect impacts of ABDs.



Aerial view of a series of ABDs in the Silvies basin.
Photo: Google Maps

The information presented here is based on interviews with Scott Campbell, who owns Silvies Valley Ranch along with his wife and another family; three other private landowners in the Silvies River watershed; the Oregon DSL; and researchers from Oregon State University (OSU) and Oregon Natural Desert Association (ONDA), who are collaborating on instrumentation and monitoring of this project. A two-day field tour of the ranch that took place in August 2016 also informed our understanding of the project.

Background: The Need for Restoration

Trapping journals from the Hudson’s Bay Fur Company indicate that in the 1820s, hundreds of beavers were removed from the Bear, Silvies and Harney Valleys of the Silvies River watershed. This near total removal of beavers initiated a change in the geomorphic trajectory of the watershed. Without beavers to maintain them, beaver dams decayed, allowing water from snowmelt and rainfall to run off more quickly. This change in hydrology was exacerbated by rapid land use changes that occurred during the Homestead Era of the late 1800s and early 1900s, as families traveled up the Silvies River, developed ranches throughout the large valleys, and began grazing domestic livestock.

Silvies Valley ranches were intensively managed by the many families who settled along the river and cleared riparian vegetation to create pastures and travel corridors. Heavy grazing by both sheep and cattle contributed to direct mechanical erosion of stream banks as well as removal of woody species. As streams began to incise, their flood plains became disconnected and they channelized, gaining erosive capacity and cutting down to bedrock in many locations, triggering a lateral erosional process that led to wide, simplified channels. This reduction in floodplain connectivity led to the conversion of wet meadows and associated species to sagebrush steppe with less grass. Over time, ponderosa pines and other more drought-tolerant vegetation replaced riparian vegetation.

After over 50 years of absentee ownership, the Silvies Valley Ranch, comprised of 90,000 deeded acres and 45,000 acres of grazing allotments on Bureau of Land Management land and the Malheur National Forest, was purchased in 2006 by a local landowner, Scott Campbell. Along with his wife and another family, Campbell is actively involved in designing innovative approaches to land management and restoration that serve to increase the profitability of ranching operations and provide a model for other people facing similar challenges in eastern Oregon. At the time of purchase, Campbell estimates that there were 54 miles of degraded stream channels in need of restoration. With the cost of conventional approaches to watershed restoration commonly exceeding \$1 million per stream mile (personal communication, Forest Service fish biologist), restoration at the scale needed on the Silvies Valley Ranch was prohibitive. The ubiquity of stream incision motivated the landowners to develop a more “low-tech”, economical approach.

Project Description

Silvies Valley Ranch initially experimented with the use of woody post structures commonly referred to as beaver dam analogues (BDAs), but they were destroyed in high flows, prompting Campbell to adopt the current rock dam technique featuring ABDs. See *The Beaver Restoration Guidebook* (Pollock 2015) for a more complete explanation of the types of beaver dam structures that exist. This approach has been streamlined through experimentation with several iterations over the past five years, and as a result, the cost of

restoration has been brought down to less than \$20,000 per stream mile.

The first installation of ABDs on the ranch occurred in 2011, and they now extend into 6 tributaries of the Silvies River. Constructed from rock quarried on the property that is then placed in streams and mixed with dirt, the dams vary in size but all span the entire width of the channel and rise above the depth of the incision, which can be up to 15 feet. Immediately following construction the structures are very visible, but after several seasons they are largely obscured by vegetation.

Dams are built at intervals of approximately one per foot of elevation drop, which can require over 100 structures per stream mile. While this is a large number, it is feasible because of the use of local materials and equipment owned by the ranch. Today there are roughly 640 ABDs on the Silvies Valley Ranch. Using the rock structures to increase connectivity, promote sediment deposition, and increase streamside vegetation will ideally support the return of beavers and dam building along the restored channels; therefore part of the restoration project includes beaver habitat enhancement. Several species of willow exist along the Silvies River and its tributaries, but only some of these species are preferred food sources, therefore the ranch owners are planting aspen trees. Aspen plantings must be caged for up to ten years in 10x10 foot enclosures that allow a cluster of trees to develop without pressure from beavers or ungulates. In addition to enhancing habitat, the ranch has placed a moratorium on beaver trapping and shooting, which has led to an increase in the number of beavers on the ranch over the past decade. Beavers have not been relocated to the site.



Volunteers construct aspen enclosures to protect young trees from browsing by deer, elk, cattle and beaver.

Photo: Robert Tilley

Project Outcomes: Benefits and Challenges

According to one of the ranch owners, structure-based restoration using channel-spanning ABDs has had a number of direct and indirect benefits related to improved floodplain connectivity, vegetation change, and increased width of riparian areas, which translates to an overall economic benefit that has exceeded the cost of the restoration through increased yields of both organic hay and livestock.

The most obvious benefit is increased forage availability for livestock in riparian areas. This change is most apparent in areas of the ranch where streams were previously disconnected from their floodplains, causing sagebrush to dominate. As water tables are rising and riparian areas are expanding these areas are now being converted back to a mix of annual grasses, which have high nutritional value to livestock. In addition to providing forage for livestock, these grasses are also bailed and sold as natural hay, generating profit for the ranch. Filling in the channels has an added benefit of reducing steep banks that create a hazard to livestock that sometimes fall into the river and drown.

The increase in wet meadows and riparian vegetation, including mature aspen stands, also serves as a fire break that can reduce the intensity and rate of spread of fire. In talking about a fire that ran through the ranch last summer, the ranch manager reported that if Camp Creek, one of the tributaries to the Silvies River, was in its pre-restoration condition, it would not have held sufficient moisture to stop the fire.

Changes in the quantity and timing of water in the Silvies River and its tributaries have also been observed but are difficult to quantify, even with elaborate monitoring systems put in place by OSU hydrologists and geomorphologists. It is hard to calculate a complete water budget that accounts for springs and local variation in geology. Nevertheless, ranch owners have observed anecdotally that there is more water and that it lasts later into the summer now. During a visit in August 2016, streams were still flowing in places that they reported had previously gone dry each year.

Other benefits observed by the rancher include increased wildlife numbers, including increased presence of beavers around the restoration dams. Population inventories have not been conducted but the increase in beavers will hopefully lead to them taking

over the restoration construction. Other changes in wildlife populations includes increased presence of songbirds and larger elk herds, which may support the development of a wildlife tourism venture in the future.

Indirect benefits to the ranch include the return of native red band trout (*Oncorhynchus mykiss gairdneri*), which have been caught in reaches of the Silvies River where they were not previously recorded in the Oregon Department of Fish and Wildlife's period of record. The vegetative response to ABDs has been variable at the Silvies Valley Ranch, but the increase in streamside willow and aspen associated with the ABDs provides shade to streams and helps maintain temperature requirements for trout. These findings suggest that, contrary to assumptions that ABDs are detrimental to fish passage, they may in fact be compatible with migratory fish.

"There are places that have turned back to wetlands and we can't graze them. [So] we have given up an acre that is now swamp; but we've gained 6 acres that are good pasture that weren't before. So you give up some land because it becomes less satisfactory to graze cattle on, but you gain a whole bunch more that is outside of that."

Growing awareness of the benefits beavers, beaver dams, and beaver-inspired restoration technologies can provide for ranch operations is accompanied by occasional frustration in some places with nuisance beavers as they cut down trees, dam irrigation ditches, and flood pastures, which sometimes leads to their removal by trapping or shooting. Silvies Valley Ranch has experienced some of these problems – every year beavers build dams in irrigation channels that must be removed and some pastures have been flooded – but these are seen as mere inconveniences and tolerable tradeoffs for the benefits accrued.

Broader Impacts

The absence of beavers during the period when most ranches in the Silvies River Watershed were established helps explain the lag time in recognition by ranchers of the role beavers play in stream channel formation and local hydrology. Continued suppression of beaver populations under previous ownership along with the elimination of dam building materials and food sources, and ongoing local skepticism about their benefits, has made their recovery a challenge. While beavers have not made a total comeback they are starting to return, and ranchers are learning how to coexist with them and even promote their return by managing for beaver habitat.

The relatively low cost of the ABD approach and the ability to retain use of riparian pastures by using range riders to move cows out of riparian areas rather than fencing them off has generated interest from other landowners in the Silvies River watershed. These landowners wish to restore riparian areas and upland connectivity, but have been prevented from doing so by the direct and indirect costs. Interviews with other landowners in the Silvies River watershed indicate that there is growing use of in-stream structures as a restoration tool, though these structures are highly variable in size, frequency, and material, depending on the degree of incision, slope of the stream channel, and materials available in proximity to the restoration site.

The greatest barrier to expanding the use of ABDs is the difficulty in obtaining a permit because of the cost of hiring the necessary experts to do the required preliminary site analysis, and the time that it takes to get approval. On the Silvies Valley Ranch, none of the existing dams were installed with a permit because the owners were unaware that a permit was required. The owners would like to continue adding structures to another tributary of the Silvies River, but are waiting for a permit to be issued by the Oregon DSL and the Army Corps of Engineers.

Concerns with ABDs

Agencies and environmental groups view ABDs as a restoration tool with cautious interest owing to concerns about potential interference with fish passage and downstream water rights holders. Water Watch of

Oregon and the Oregon Water Resources Department have voiced concern over the risk of causing “injury” to downstream water users by preventing them from receiving allocated water when it is needed, and objected to enabling legislation due to this uncertainty. Water users lower in the watershed are accustomed to, and take advantage of, historically high spring runoff for flood irrigation to produce hay. Campbell counters these concerns by pointing out that the restoration is helping to keep streams from going dry in the summer, thereby benefitting downstream users, who may just have to adjust to different timing of flows.

Additional concerns have been raised about the permanence and lack of porosity of the engineered rock and dirt structures when compared to real beaver dams. ABDs built with rock are designed to fill the entire channel and spread water to the floodplain immediately, which means they can be very large. The biggest structures on the Silvies Valley Ranch contain over 1,000 cubic yards of material in the largest creeks, although on average they contain closer to 200 cubic yards. Structures that are excessively large in proportion to the width of the valley in which they are placed can create ponds and pools that are incongruent with the effects that a population of beavers constructing beaver dams would create. Limitations on structure height based on bank full height would help ensure the structures are being used to restore ecological functions rather than simply impounding water.

Oregon Department of Fish and Wildlife (ODFW) has raised other concerns, determining that certain styles of ABD construction do not have sufficient interstitial space for fish passage. There is still debate about whether or not this is necessary based on the life history patterns of the fish that occupy these streams and their ability to adapt by migrating when the water is high and flows over the ABDs, and remain in ponds when the water is low. Ironically, the ponds, which benefit the fish, did not exist prior to restoration and, before the ABDs were installed, there were no fish in most streams on the ranch in summer because they ran dry. Fisheries biologists are also concerned that the ponds will reach temperatures too high for fish, and that they will become trapped in pools as water levels drop in the summer. The concern for fish passage is being addressed by the addition of fish ladders around the ABDs on the ranch.

Legal and Policy Framework

The Silvies River is considered “waters of the state”, putting it under the jurisdiction of Oregon DSL at the state level. Because the river flows into Malheur Lake, an historically navigable waterway, the Silvies also falls under the regulatory authority of the Army Corps of Engineers at the federal level; however permits issued by the state generally satisfy the requirements of the Corps. Currently, state and federal regulations require private landowners to go through an individual permit application process administered by DSL before they are allowed to install any in-stream structure, including both BDAs and ABDs. All installations require a removal/fill permit from DSL.

Concern for fish passage also brings the structures under scrutiny from ODFW, which oversees compliance with ORS 509.585 and 509.610 requiring the maintenance of fish passage by the owner of artificial obstructions. It is unclear whether ABDs allow for passage that sufficiently mimics the passage of fish in the absence of these structures. ONDA and OSU are working together to provide monitoring to improve understanding of the effects of ABDs on fish passage.

Multiple layers of regulation have made the process of installing the ABDs onerous to the point that several landowners have constructed them hoping forgiveness will be easier to obtain than permission. Moreover, a lack of enforcement of existing regulations when structures are installed illegally seems to be reducing the likelihood that people will go through the permitting process as currently structured. To address these problems, during Oregon’s 2015 legislative session, House Bill 3217 was introduced to eliminate state regulation associated with the installation of ABDs and streamline the process for implementing this “water management technology”. The bill was triggered by interest in the restoration work underway at Silvies Valley Ranch. The bill failed, however, due in large part to a lack of data about the long-term effects of ABDs, which prevented the development of language in the bill that stakeholders having competing values could agree on.

In the absence of successful legislation, legislators recognized a need for further research and monitoring and assembled a Rules Advisory Committee (RAC), comprised of state and federal public land managers, lobby groups, legislators, and the Oregon Water Resources Department. The RAC wrote an administrative rule that is in a public comment period. If approved Oregon Administrative Rule 141-093-0285 will initiate a pilot program using the installations on the Silvies Valley Ranch to improve understanding of ABD impacts. The pilot rule is being designed as a 10-year trial that will allow additional restoration structures to be installed in the Malheur and Harney Lakes basins. The administrative rule includes guidelines for siting, size, construction, fish passage and monitoring. So far the rule is only being tested at Silvies Valley Ranch but anyone in the region will be able to apply for an expedited permit under the new rule. People in other areas must still go through the lengthy individual permit process.

Although the permitting process is seen as arduous by most people involved in this kind of restoration, it is seen by some as an important and protective measure to address any potential negative ecological impacts of ABDs as we continue to learn more about them through ongoing monitoring and research.



Cows watering upstream of a beaver dam.
Photo: Rachael Davee

Enabling Factors

Healthy riparian areas have long been acknowledged as important to stream health, but the cost of watershed restoration and apprehension about becoming involved in government cost-share programs that support restoration have been deterrents for some ranchers. The relative affordability of the ABD approach makes it more appealing to landowners. ABDs can be constructed using local materials and equipment that landowners often already own. Also, the same quality of permanence that makes these structures controversial makes them appealing to landowners because they require little maintenance after the first few seasons. The ABDs are a good fit on ranches that are using flood irrigation to grow hay because giving water more frequent access to the floodplain makes irrigation more efficient.

Although there are other types of artificial structures that mimic beaver dams, low-rise rock dams are particularly appropriate for streams that have incised all the way down to the bedrock, because posts that form the basis of some alternate types of dams, e.g. BDAs, cannot be pounded into the rock. Moreover, highly eroded streams may lack the sediment required to fill in behind woven post and vegetation structures. Rock dams are also well suited to places where there is no inset flood plain to create a slow aggradation process. Finally, the ranch owner recommends this technique to other ranchers because they have continued to graze at full capacity in riparian pastures during the restoration process.

Looking Ahead

As stated above, in 2015 Oregon legislators tabled a bill that would have given blanket approval to use ABDs owing to a lack of information on the effect that these structures have on water rights and fish. This failed process indicates that using legislation to change the rules may not be the best approach to increasing cooperative capacity within the regulatory sector. The removal of a legislative solution has led interested parties such as the Silvies Valley Ranch,

many state and federal agencies, and lobby groups to work collaboratively on changing the state permitting system requirements from an individual permit to a general permit that would include approval for a series of structures within a given project.

If approved, this change in administrative rule would expedite the permitting process. DSL reports that in the pilot permit application program, landowners will be required to show that they have made earnest attempts to improve riparian vegetation in addition to installing in-stream structures to achieve restoration goals. In the meantime, permits for ABDs and similar in-stream structures must still go through the general permit process, which requires wetland delineation and highly specialized scientists, all of which can be prohibitively expensive for a landowner.

Approval of OAR 141-093-0285 was made possible after much debate and revision in order to decide on language that was suitable to the diverse members of the RAC. One key to the ability of the committee to gain a common understanding of the situation was to take several field trips to various restoration sites, including the Silvies and Blitzen Rivers, in order to see what they were making decisions about on the ground. Field trips helped reduce inaccurate preconceived notions and address valid concerns about ABDs. This type of joint fact-finding can be very effective in collaborative watershed restoration efforts where conflicts exist.

Conclusions

“Provide more time for some of the regulatory people to get out and take a look and see what it is that the dams look like and just kind of be more involved in the field on the ground. I think there's a lot of misconceptions about them” – Project Stakeholder

The structure building taking place on the Silvies Valley Ranch is unique and indicates a sea change happening in the larger watershed as private landowners are seeking affordable ways to keep their ranches in an ecological condition that helps them meet their economic goals. To date, the ecological

Authors

Rachael Davee
Geosciences Department
Oregon State University
Corvallis, OR
daveera@oregonstate.edu

Susan Charnley, PhD
U.S. Forest Service, Pacific
Northwest Research Station
Portland, OR
scharnley@fs.fed.us

Hannah Gosnell, PhD
Geosciences Department
Oregon State University
Corvallis, Oregon
gosnellh@geo.oregonstate.edu

Acknowledgments

Thank you to the Silvies Valley Ranch, members of the local community, and project stakeholders for your time and insights.

References

OAR Oregon Department of State Lands draft rule: <http://www.oregon.gov/dsl/docs/Rulemaking/DIV%2089->

Pollock, M.M., G. Lewallen, K. Woodruff, C.E. Jordan and J.M. Castro (Editors) 2015. The Beaver Restoration Guidebook: Working with Beaver to Restore Streams, Wetlands, and Floodplains. Version 1.0. United States Fish and Wildlife Service, Portland, Oregon. 189 pp. Online at: <http://www.fws.gov/oregonfwo/ToolsForLandowners/RiverScience/Beaver.asp>

and economic benefits of ABDs on the ranch have far outweighed any drawbacks to the landowners, including drawbacks associated with the behavior of beavers themselves. Potential concerns include impacts on fish and on downstream water users having water rights; more information is needed on these possible impacts.

The current individual permit process is onerous and calls for reconsideration to avoid dissuading applicants. People who are overwhelmed by the application process won't take advantage of this tool, leaving streams in a degraded state and continuing to incise. Nevertheless, the permit process must be sufficiently rigorous to protect stream systems from alterations leading to negative impacts in the future. Including monitoring protocols in the pilot permit process would improve the ability to track the impacts of ABDs on watersheds. At a minimum, semi-annual photo points are effective for tracking temporal change; additional monitoring to document changes in water timing over the year is useful too. Monitoring data would provide guidance in future projects. Including federal and state agencies as stakeholders in a participatory monitoring process is an important step in addressing their concerns so that ABDs can also be considered as an option when doing watershed restoration on public lands.

Summary of Findings

1. Low-rise rock dams can meet the dual objectives of ecological restoration and economic gain.
2. Low-rise rock dams can be a relatively cost-effective approach to watershed restoration, especially when using materials sourced locally to make them more affordable.
3. Carte Blanche on structure building is unlikely to be appropriate owing to concerns over potential impacts on fish and water rights.
4. It is important for dams to allow for fish passage and be sized appropriately.
5. If current regulations associated with installing in-stream structures are simplified, people will be more likely to follow the legal permitting process, report their use, and mitigate any potential negative impacts.
6. Further investigation into water rights issues is needed; there is a lack of information on whether and how low-rise rock dams affect downstream users.
7. Fieldtrips have been useful in addressing concerns of individuals within regulatory agencies.